Your Continuous Delivery

Project position statement

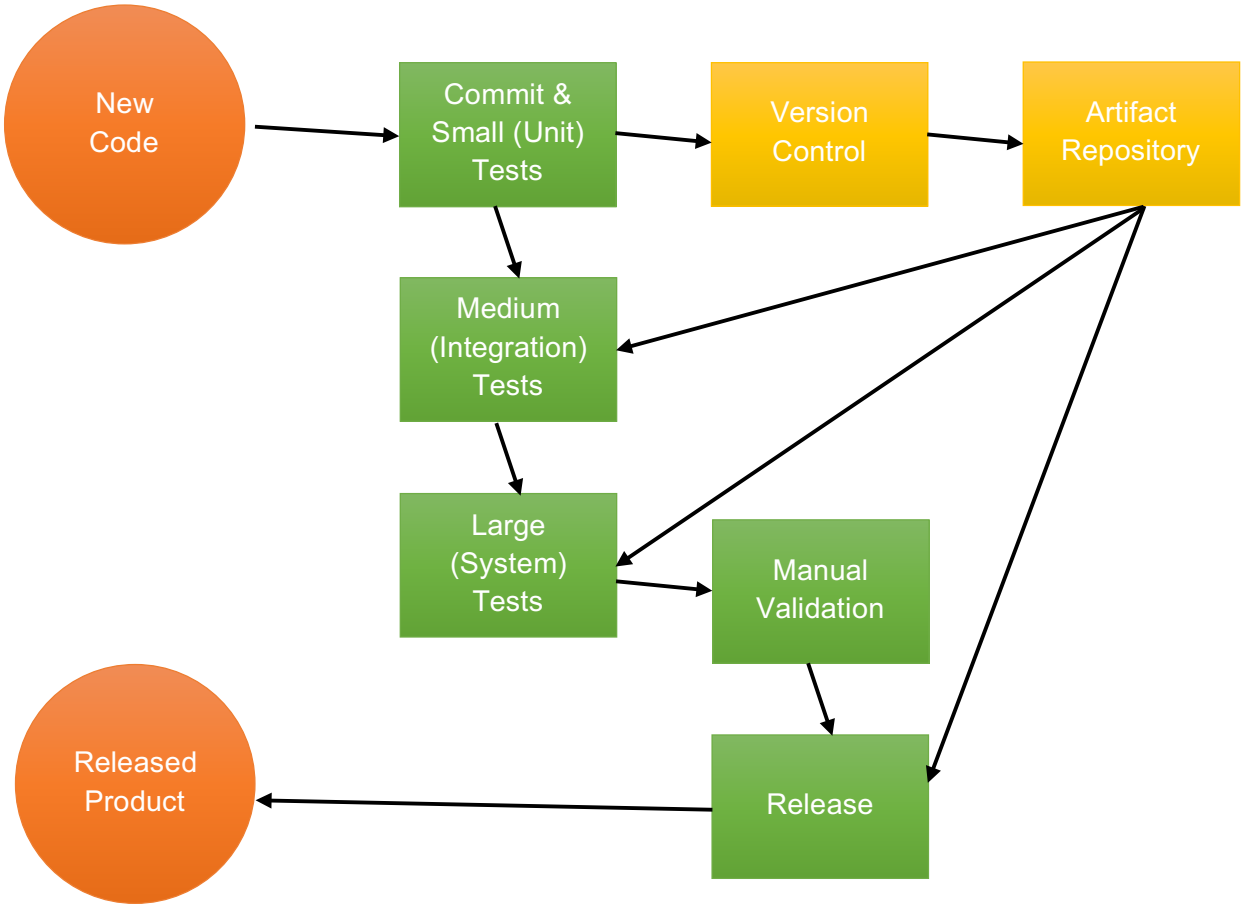
For world travelers who would like to understand the detail information of every single place they visit, Toura is an audio tour app that provides narrative stories on tourist attractions, restaurants, and many more locations. Unlike traditional audio tour devices which are usually provided in specific venues like museums, our product is accessible everywhere with GPS support and uses an incentive-based crowd-sourced model to collect this information from local people, restaurant owners, etc.

Core / summary value hypothesis

Travelers, especially backpackers, need in-depth information of tourist attractions. They would like to learn this information from locals so they use couch-surfing and homestays rental websites to meet with local people.

If we provide travelers with a tool for listening narrative stories of tourist attractions, then they will subscribe it, use it, and it will improve their travel experience.

The Continuous Delivery Pipeline



Facilitator Guide

Area	Notes & Questions
Introduction	Our first goal here is just to get a shared view of how our process works from the point where someone commits new code to where we're released product. Our second goal is to look at the rough parts- the parts that are eating up big chunks of the team's time, parts that seem like they should be better. Our final goal is to look at where we want to focus next on improving, be that changes to our process and/or changes in supporting infrastructure, like investing in more automation. I'm not trying to sell any point of view here, just that it's worth our while to look at this as a team and think about how we keep making it better.
Commit & Small Tests	Small or unit tests are tests that aim to confirm the business logic functions works. These tests involve simulating input and checking output of those functions. These tests do not involve connecting third-party modules nor connecting the database. Code is committed to internal Git server. It will then send a Git hook to Jenkins engine to carry out unit tests and build. In case if any unit tests failed, an error message will be sent to the people who committed the code and did the code review. If there is no error, the Jenkins engine will continue to build the program, wrap it as a Docker image or mobile app package, and store it to the Artifact Repository. The program stored there will be used for subsequent testing and deployment. Unit tests can also be run during development. Recently, Visual Studio 2017 released a new live unit testing function. This can make error being reported much earlier in the development process and thus improve code quality.
Medium (Integration) Tests	Medium tests aim to test whether different system modules and components can work together. The tests will try to call the endpoint APIs to see if the whole business logic works from end-to-end, including database I/O and logging. Docker images from the Artifact Repository are pulled to testing server and run. Testing databases are also connected for these tests.
Large (System) Tests	Large system tests aim to test the UI components and its interaction with the server's endpoint APIs. The mobile app package from the Artifact Repository will be sent to Appium for testing on multiple models of mobile device.
Manual Validation	Ensure the UI display well on the testing mobile device. Ensure the test cases have covered the changes adequately. Compose and check the release note of each release.

Release	After finishing all tests and manual validation, the new Docker images from Artifact Repository will be automatically pulled to the production Kubernetes cluster for deployment. New processes will be spawned while the olds are being terminated one by one. The server load balancer will ensure zero down time during release. The mobile app packages from Artifact Repository will be sent to their corresponding App Store for approval and release. If a rollback is need, use the previous version of Docker image and mobile app package to redo the above steps.